

Transportation Planning



Transportation Planning

IP-4160

Major DePriest

Overview

- Objectives, Challenges, & Terms
- Supported Commander Planning Responsibilities
- Transportation Planning Systems
- Transportation Systems
- Transportation in Deliberate Planning
- USTRANSCOM Mission and Transportation Component Commands (TCCs)
 - MSC, SDDC, AMC
- Summary

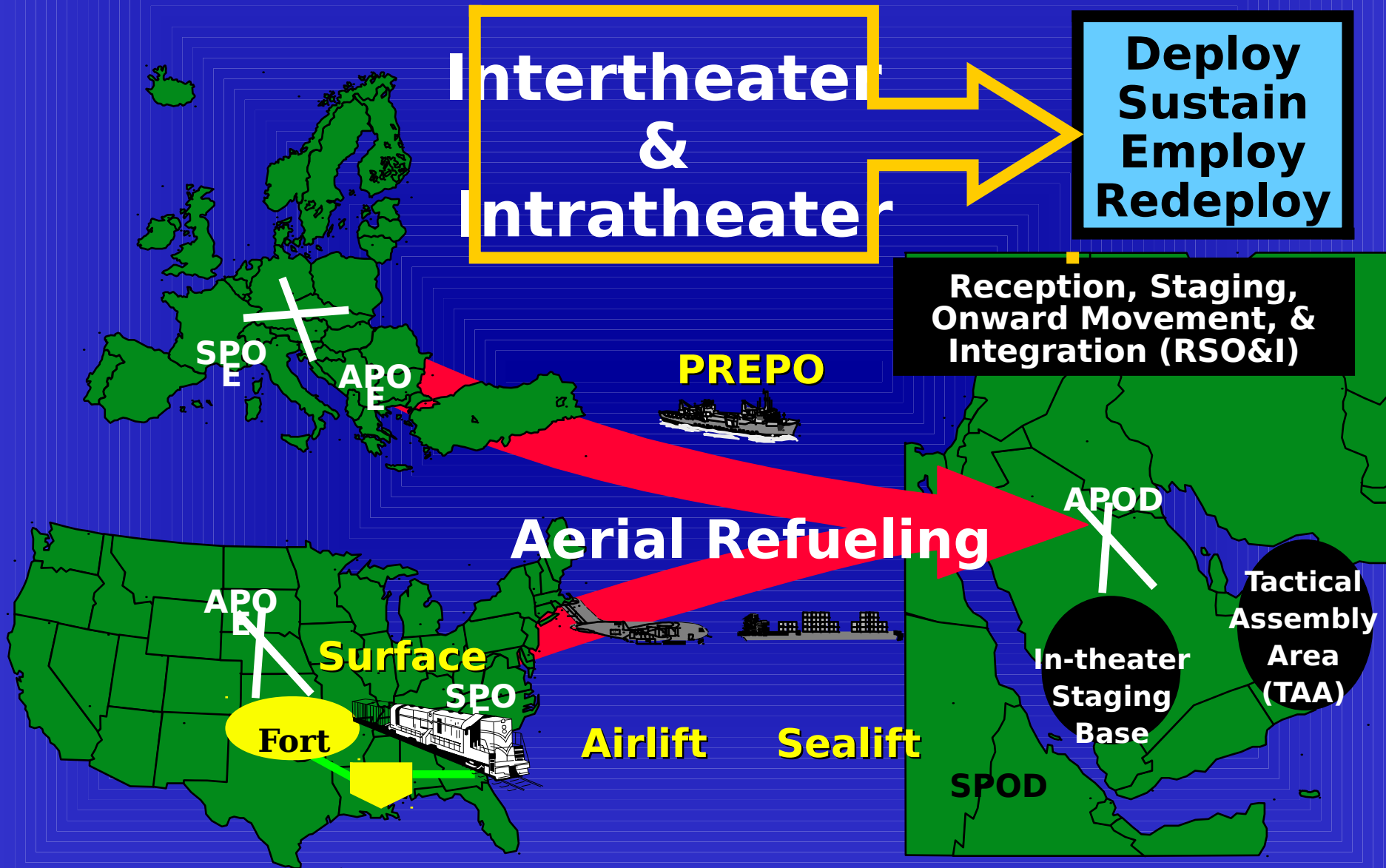
SAMPLES OF BEHAVIORS

- Know the objectives of transportation planning.
- Define working MOG and parking MOG.
- Know the planning responsibilities of the supported commander.
- Describe how Joint Flow and Analysis System for Transportation (JFAST) supports transportation planning.
- Know the three USTRANSCOM Transportation Component Commands (TCCs) ***and their responsibilities.***

Transportation Planning Objectives:

- Project combat capability
- Optimize usage of transportation resources
- Consider various modes and sources of lift
- Develop transportationally feasible TPFDDs during deliberate planning for modification/usage during crisis

The Challenge



Terms

Maximum On Ground (MOG)

- Parking MOG - Total number of planes that can be parked at an air facility.
- Working MOG - How many or how quickly parked aircraft can be offloaded, materiel throughput from the port, and aircraft serviced and prepared for departure.

Terms

Categories of Lift

- Intertheater lift
 - Between theaters
 - USTRANSCOM owned
 - CONUS to Overseas, Overseas to Overseas
 - Strategic Lift: C-5, C-17, C-141, Contract Airlift, Ship
 - Objective: project combat capability w/ Rapid Global Mobility
- Intratheater lift
 - Within a theater / Area of Operations
 - Theater Combatant Commander controlled
 - Tactical Lift: C-130, C-17 (limited), Contract Airlift, Truck, Bus, Rail, Boat (Ferry, LSV, HSV, Barge), Helo (CH-47)
- Surface Lift moves materiel by land haul (road, rail, pipeline) or boats

Intratheater Airlift

AN-12



H-60



CH-47



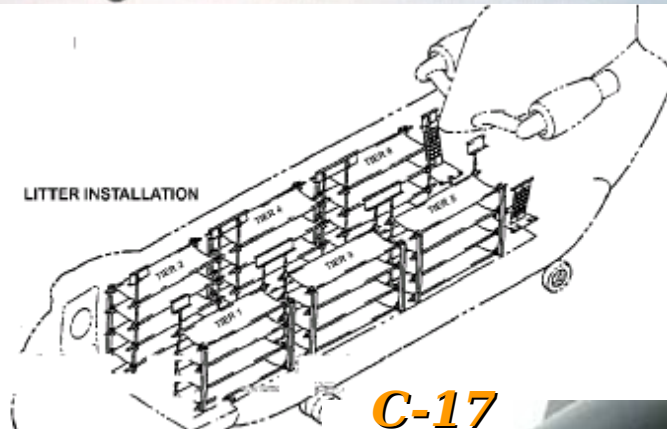
C-27J



Coalition C-130



LITTER INSTALLATION



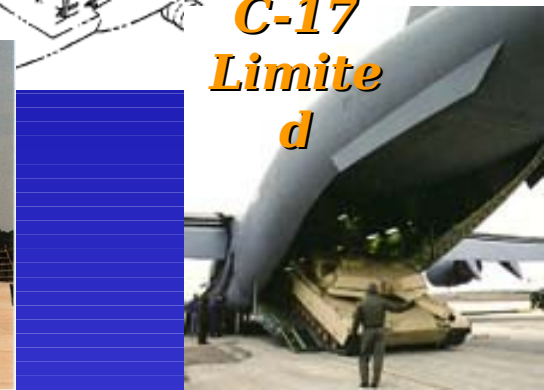
V-22



Fokker F-60



C-17 Limited



Intratheater Surface-Ground

- Ground – Trucks, Buses, Rail, Pipeline, Pack Mule



Photo by: Andrew Koenig



National Railway Equipment (12/92)



***Fuel/POL
Pipeline***



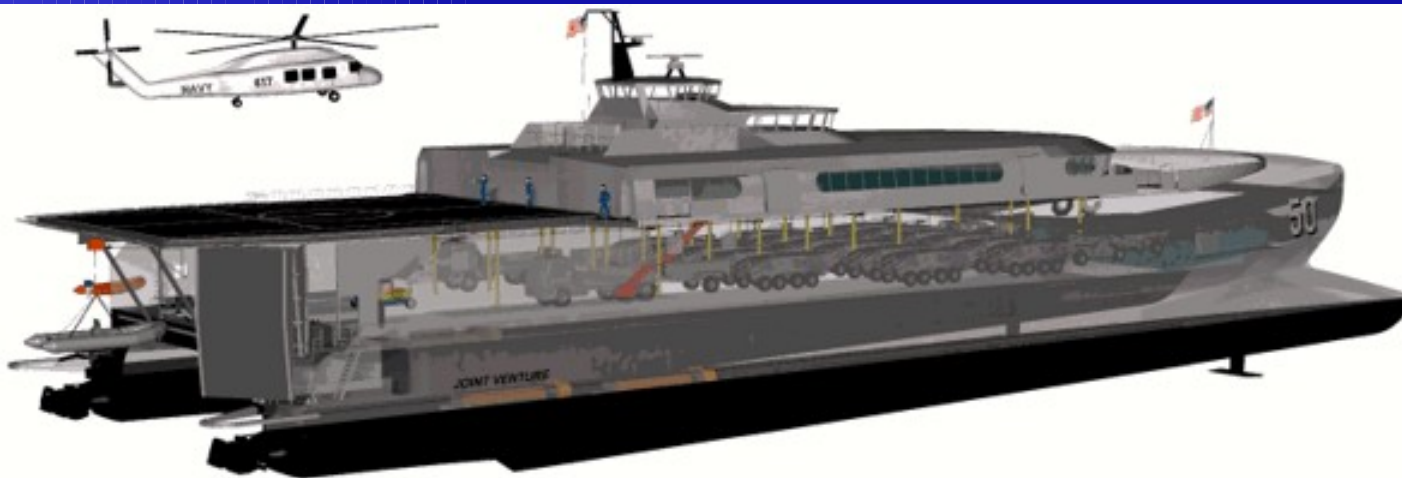
Intratheater Surface-Water

Water – LSV, HSV/TSV, Barges, Ferry



LSV – 12 knots, 44 C-17 loads

HSV/TSV – 40+ knots, 12 C-17 loads



Supported Commander Planning Responsibilities

- Develop a transportationally feasible TPFDD, including TPFDD Letter of Instruction (LOI)
- Coordinate with TRANSCOM for TPFDD:
 - Prioritization of forces
 - Required Delivery Dates
 - Mode and source of lift
 - Movement Flow
 - Shortfalls / LIMFACs

Joint TPFDD LOI

- **Gives rules and guidance for:**
 - **Priority of air movement for major units**
 - **Apportionment of airlift between Service**
 - **EAD, LAD, POE, POD, RDD, CINs, PINs**
 - **TPFDD Development Process and Procedures**
 - **Provides ULN development rules**
 - **Provides FM development rules**
 - **TPFDD Validation Process and Procedures**
 - **TPFDD Scheduling, Allocation, and Manifesting Procedures**
 - **TPFDD POC's for both supported/ing staffs**

Transportation Planning Systems

- **DCAPES**
 - **AF JOPES Editing Tool (JET) - TPFDD editor**
 - AF System which enforces AF planning business rules
 - Helps coordination / communication between planners
 - Shows both Manpower/Personnel and Logistics Detail
 - Update the TPFDD using LOGMOD DSOE and LOGPLAN data imports
 - Real-time update to TPFDD in JOPES
 - Global Status of Resources and Training Sys.(GSORTS)
 - Access to GSORTS (and ART via SIPRNET)
 - UTC Registration & Maintenance
 - Includes UTC POC and coordination data and tools
 - Lookup tables for GEOLOC, ICAO, units, PAS codes, FAMs, etc.
 - Forces planning and sourcing
 - **Joint Flow & Analysis System for Transportation (JFAST)**

TPFDD Analysis

- Joint Flow and Analysis System for Transportation (JFAST)
 - Analyzes a TPFDD to determine its feasibility according to strategic lift usage, port handling simulating loading/unloading, optimum trans modes, and other factors
 - Identifies shortfalls, limiting factors, and other problems which must be corrected in the TPFDD
 - Assists in selecting a Course of Action (COA)

Transportation Systems

- Global Transportation Network (GTN)
- Global Air Transportation and Execution System (GATES)
- Global Decision Support System (GDSS)
 - Used by Air Mobility Command to communicate aircraft status, movement, scheduling
- C2IPS - used by command post
- Single Mobility System (SMS)
 - Web-based computer system that provides visibility of air, sea, and land transportation assets
 - Provides aggregated reporting of cargo and passenger movements
 - Collects plane, ship, and truck movement data from other computer systems such as GTN, CAMPS, GDSS, JALIS, DTTS, and ANGMU

Transportation Systems

- Cargo Movement Operating System (CMOS)
- Transport Coordinators – Automated Information for Movement System II (TC-AIMS II)
- Computer Aided Load Manifesting System (CALM)
- Automated Air Load Planning System (AALPS)

Transportation Systems Training

- **Joint Deployment Training Center, Ft Eustis**
 - **JOPES Support Personnel Course**
 - **JOPES Specialty Course**
 - **JOPES Action Officer Course**
- **Air Mobility Warfare Center, Ft Dix**
 - **GCCS Combined Course**
 - **Other GCCS Applications Courses**

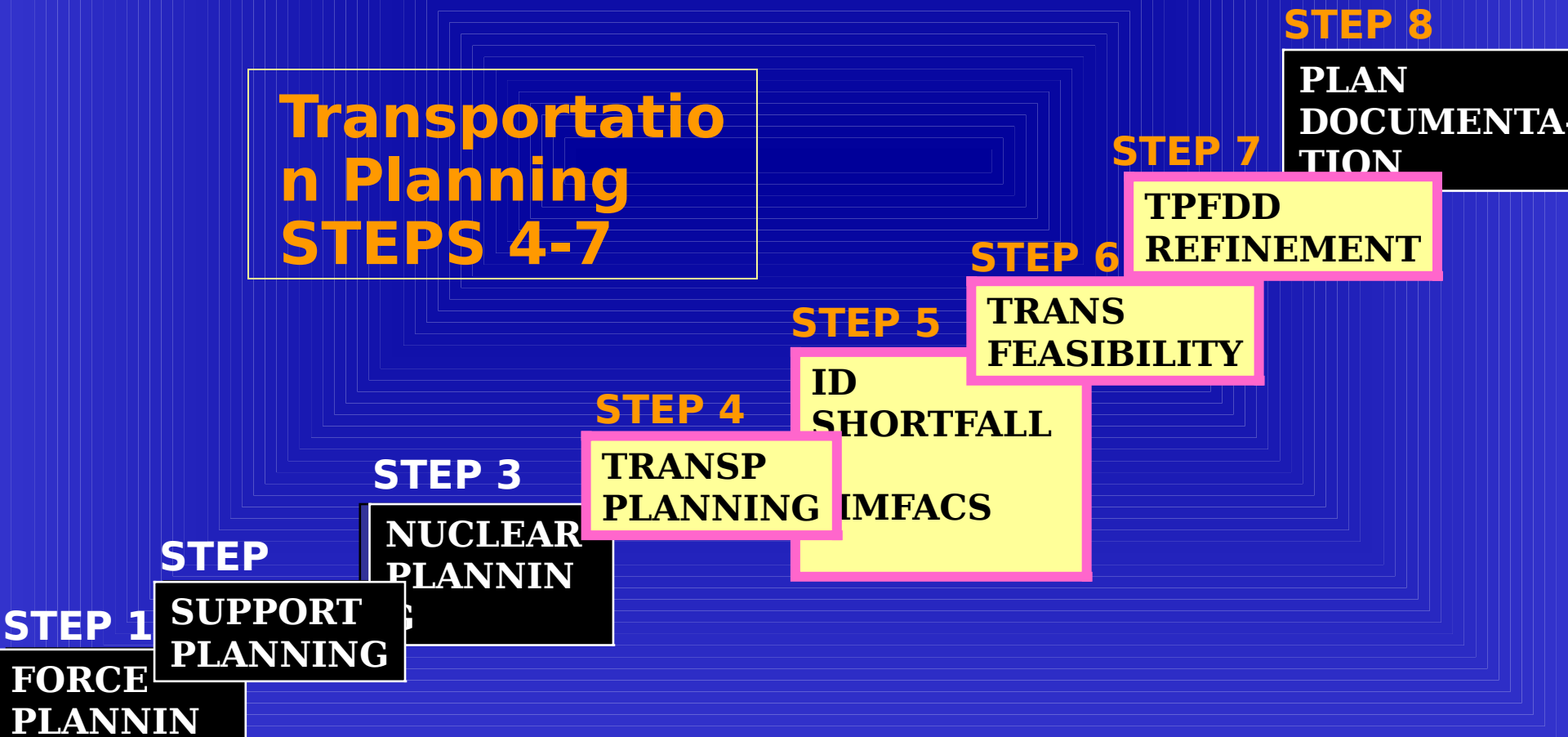
Deliberate Planning Phase

III

DELIBERATE PLANNING PHASES

Initiation	Concept Develop	Plan Develop	Plan Review	Supporting Plans
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**Transportation Planning
STEPS 4-7**

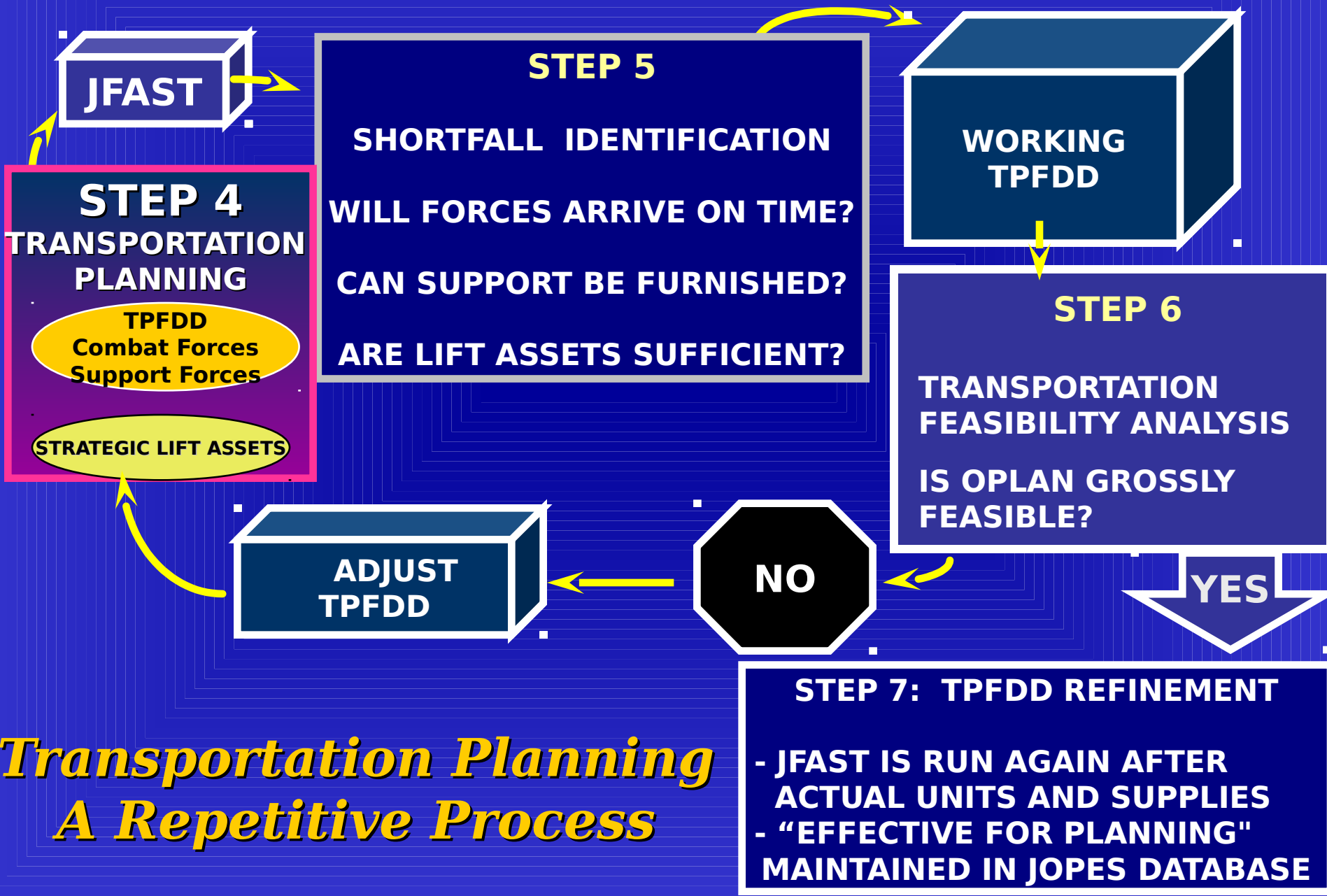


Deliberate Planning

Intertheater Lift Comparison

- **AIRLIFT**
 - **Very Fast**
 - **Very Flexible**
 - **Limited Capacity**
 - **Most Expensive**
 - **Possibly Origin=POE and/or POD=Destination**
 - **Airfield Dependent**
 - **Requires special materiel handling equipment for CRAF, KC-10s, commercial**
- **SEALIFT**
 - **Slow to very slow**
 - **Some flexibility**
 - **Huge capacity (1 ship = 130 C-5s)**
 - **Least expensive**
 - **Seaport-dependent**
 - **Requires special offloading equipment for civilian ships**
 - **Need robust intratheater lift**
 - **Need large port staging area**

Deliberate Planning



USTRANSCOM

Mission



***"...PROVIDE AIR, LAND, AND
SEA TRANSPORTATION FOR
THE DEPARTMENT OF
DEFENSE IN PEACE AND
WAR"***

USTRANSCOM Typical Ops Week



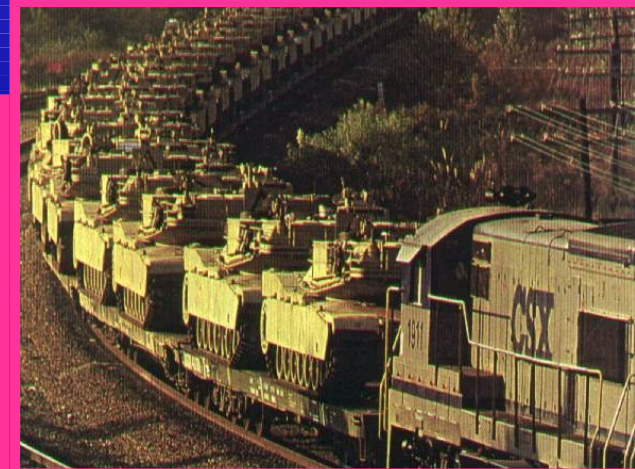
Air Mobility Command

**749 Missions
1,838 Sorties
60 Countries**



Military Sealift Command

**23 Ships Underway
20 Ports Visited
18 Countries**



Military Surface Deployment & Distribution Command

**350 Major Shipments
25 Ports Managed
18 Countries**

USTRANSCOM Component Commands (TCCs)



**MILITARY SEALIFT
COMMAND**



**MILITARY
SURFACE
DEPLOYMENT &
DISTRIBUTION
COMMAND (MSDDC)**



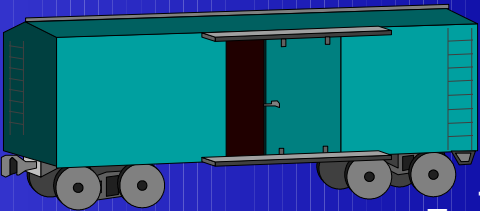
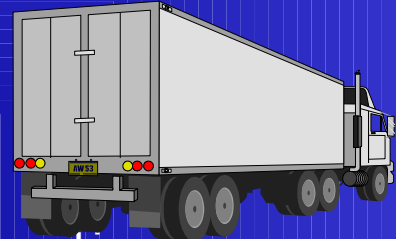
**AIR MOBILITY
COMMAND**

• **SOB**



Military Surface Deployment & Distribution Cmd (SDDC)

- Operations Center at Ft Eustis, VA
- Key Responsibilities:
 - Single DoD Manager for Worldwide Port Operations
 - **Prepares ports for ships and cargo**
 - **Manages Common-User Ocean Terminals, Intermodal Container Management, Traffic Management**
 - Traffic Management support
 - Books DoD airlift passengers
 - Responsible for moving forces and supplies from Origin to POE in CONUS
 - Provides interface between DoD shippers and commercial carriers
 - Defense Freight Railway Interchange Fleet
 - Deployability/Transportability Engineering Analyses



Surface Fleet Force Structure

Military Surface Deployment & Distribution Command



7 CONUS

Terminals



1,796

Railcars



11,457

Containers

Other Commercial Support



**Port Authorities
(17 Strategic
Ports)**



Rail



Trucking



Containers

Ports for National Defense



USTRANSCOM Component Commands (TCCs)



**MILITARY SEALIFT
COMMAND**

**MILITARY
SURFACE
DEPLOYMENT &
DISTRIBUTION
COMMAND (MSDDC)**

**AIR MOBILITY
COMMAND**



Military Sealift Command (MSC)

- **KEY RESPONSIBILITIES:**

- Command and Control of all Strategic Sealift
- Manage and Activate Fast Sealift Ships (FSS)
- Manage Ready Reserve Force, Upon Activation
- Contract for Commercial / Intermodal Capacity
- Manage Afloat Prepositioned and Maritime Prepositioned Forces Vessels
- Logistics Over The Shore (LOTS)

- **ADVANTAGES:**

- **COST = 10% of Airlift**
- **1 Ship = 130 C-5s**

- **COMMERCIAL LIFT:**

- Containers

- **SOB**



Strategic Sealift Forces

Military Sealift Command (MSC)



8 Fast Sealift Ships (FSS)



11 Large Medium Speed RO/RO (LMSR)

Maritime Administration (MARAD)



31 RRF RO/RO



37 Other RRF

- Breakbulk (14)
- Tanker (7)
- TACS (9)
- Lash (4)
- Sea Barge (3)

Commercial



- US Flag (102)
- Effective US Control (EUSC) (170)
- Foreign Built

Logistics Over the Shore

- Transfer of cargo from
 - Strategic lift FSS to
 - Landing Craft, Medium 8 (LCM-8) = Mike Boat





Afloat Prepositioning Fleet

- 36 ships prepositioned in the Arabian Gulf, Mediterranean, Diego Garcia, Guam and CONUS
 - 13 ships - U.S. Marine Corps cargo (MPF ships)
 - 13 ships - U.S. Army cargo (APS-3 ships)
 - 4 ships - U.S. Air Force cargo (munitions)
 - MV Maj Bernard F. Fisher
 - MV A1c William H. Pitsenbarger
 - MV Merlin
 - MV Capt Steven L. Bennett
 - 3 ships - Defense Logistics Agency
 - 2 ships - Navy Fleet Hospital/MCDS
 - 2 T-AVBs (aviation support) in CONUS



USTRANSCOM Component Commands (TCCs)



**MILITARY SEALIFT
COMMAND**



**MILITARY
SURFACE
DEPLOYMENT &
DISTRIBUTION
COMMAND**



**AIR
MOBILITY
COMMAND**



Air Mobility Command (AMC)

- Mission: Rapid, global mobility and sustainment for America's armed forces
- Provide strategic airlift for global mobility
- <http://public/scott.af.mil/hqamc/>
- AMC/CC is also TRANSCOM
- Scott AFB, IL





AMC Missions

- Worldwide Airlift of Cargo and Passengers
- Airdrop Operations
- Aeromedical Evacuation
- Special Operations
- Air Refueling
- Operational Support Airlift
- Presidential Support
- Humanitarian



AMC Types of Airlift

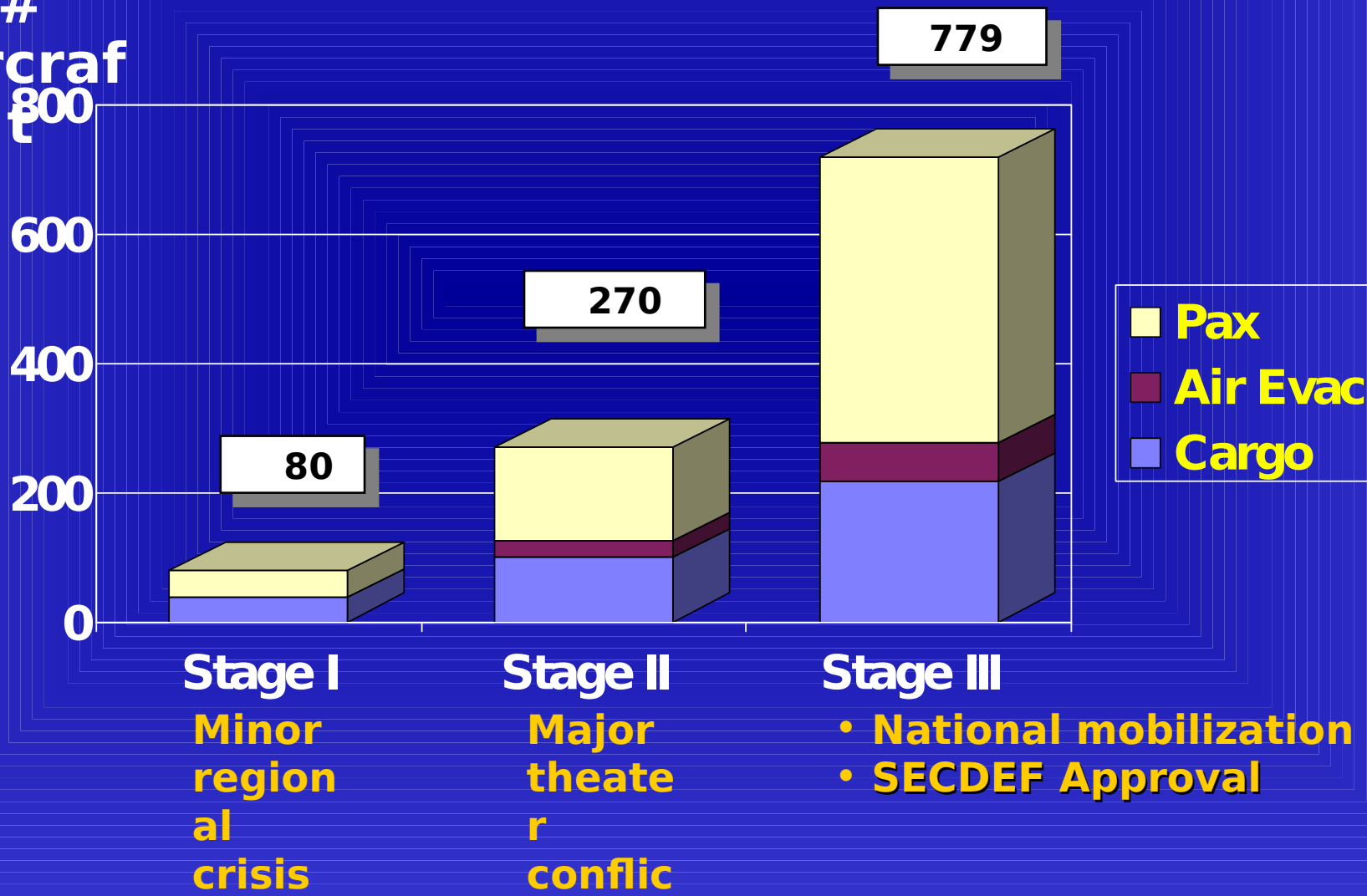
- Military Airlift
- Contract Airlift
- Civil Reserve Air Fleet





Civil Reserve Air Fleet

Aircraft



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USTRANSCOM Component Commands (TCCs)



**MILITARY SEALIFT
COMMAND**



**MILITARY
SURFACE
DEPLOYMENT &
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**AIR MOBILITY
COMMAND**

• **SOB**

Innovative Ideas

C-5B Upgrades - 80% service life remaining, NAV, Safety Eq, Autopilot, Engines, Pylons, APU's, skin and frame, ~~ear~~ pressurization system

TF39-1C = 41,000 lbs. of thrust
to the

TF39 CF6-80C2L1F = 52,500-63,500 lbs. of thrust

1.28-1.55x's thrust ratio of TF-39

(Most powerful TF engine powering
B-777200LR/3000ER)

Prototype GE TF90-115B = 127,900 lbs. of thrust

3.12x's thrust ratio of TF-39



Innovative Ideas



**Lighter than air ships – 100 STons,
Maintenance low, vertical landing, 135 mph
Double stacked pallets – Greater efficiency,
6K/3K**

